

REMARKS

In view of the following remarks, the Examiner is requested to allow Claims 1-5, 7-10, 26-27, and 29, the only claims pending and under examination in this application.

Claim 1 has been amended. Support for this amendment may be found throughout the specification, such as on page 36, lines 30-34 and the claims as originally filed.

Claim 6 has been canceled without prejudice.

New claim 29 has been added. Support for claim 29 may be found in the specification on page 13, lines 4-8.

No new matter is added.

Claim Rejections – 35 U.S.C. § 112

Claims 1-10 and 26-27 were rejected under 35 U.S.C. § 112, second paragraph as allegedly omitting elements. Without acquiescing to the correctness of this rejection and solely to expedite prosecution, Claim 1 has been amended and Claim 6 has been canceled. In view of the currently amended Claim 1, this rejection may be withdrawn.

Claim Rejections – 35 U.S.C. § 101

Claims 1-10 and 26-27 were rejected under 35 U.S.C. § 101 as allegedly lacking a tangible result. Without acquiescing to the correctness of this rejection and solely to expedite prosecution, Claim 1 has been amended. In view of the currently amended Claim 1, this rejection may be withdrawn.

Claim Rejections – 35 U.S.C. § 102

Claims 1-2, and 26-27 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Morris et al. (EP 0799897 A1). The Applicants traverse this rejection.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, (Fed. Cir. 1987).

The standard for anticipation under section 102 is one of strict identity. An

anticipation rejection requires a showing that each limitation of a claim be found in a single reference, *Atlas Powder Co. v. E.I. DuPont de Nemours & Co.*, 224 U.S.P.Q. 409, 411 (Fed. Cir. 1984). Further, an anticipatory reference must be enabling, see *Akzo N.V. v. United States Int'l Trade Comm'n* 808 F.2d 1471, 1479, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986), *cert denied*, 482 U.S. 909 (1987), so as to place one of ordinary skill in possession of the claimed invention. To anticipate a claim, a prior art reference must disclose every feature of the claimed invention, either explicitly or inherently. *Glaxo v. Novopharm, Ltd.* 334 U.S. P.Q.2d 1565 (Fed. Cir. 1995).

The claims at issued are directed to a computer-readable medium comprising instructions for decoding encoded array information obtained from one or more array information features after hybridizing an array comprising said array information features to a sample. The Applicants submit that Morris does not disclose each and every element of the rejected claims. For example, Morris does not disclose instructions for decoding encoded array information.

Morris's disclosure is directed to an array having tag nucleic acids to track multiplex compositions. In making this rejection, the Examiner points to Fig. 5 in Morris as allegedly anticipatory. However, Fig. 5 of Morris's disclosure merely shows that the control oligonucleotides are arranged to form the phrase "DNA TAGS." Mere words such as "DNA TAGS" do not provide instructions for decoding encoded array information, as required by the rejected claims.

Moreover, the currently amended Claim 1 requires instructions that "names an executable program for decoding array information, as originally presented in Claim 6. Nowhere in Morris is there a disclosure of an instruction naming an executable program for decoding array information. The Examiner points to page 12, lines 33-40, as allegedly teaching the original Claim 6. However, a detailed analysis of the passages cited by the Examiner reveals that Morris only discloses a computer program for designing tag sequences. Instruction naming an executable program for decoding array information is nowhere to be found.

In addition to failing to disclose "instructions for decoding encoded array information" and "instruction [naming] an executable program for decoding array information," Morris also does not disclose two other elements of the claims:

- 1) encoded array information; and
- 2) array information features.

Again, a detailed review of Morris's Fig. 5 reveals neither array information features nor coded information about the array. In Fig. 5, the control oligonucleotides complementary to the control targets are arranged on an array such that binding of the control oligonucleotides clearly demonstrates that there is no cross-hybridization between the control targets and the tag sequences (Fig. 5 legends on page 5).

First, the Applicants submit that the control oligonucleotides arranged in "DNA TAGS" do not provide encoded array information. Words such as "DNA TAGS" do not qualify as encoded array information because DNA TAGS do not convey information about Morris's array. Morris's DNA TAGS does not refer to information that is particular to the array but rather to demonstrate that there is no cross-hybridization between the control targets and the tag sequences. The Applicants further submit that "DNA TAGS" merely spells out English words. It does not encode any information about the array. It also does not provide any instruction for decoding encoded array information, as discussed above.

Second, the Applicants contend that Morris does not provide array information features as claimed. The control oligonucleotides disclosed in Morris are not array information features because they do not provide any information about an array, as required by Claim 1. "Information about an array" is clearly defined in paragraph [052] in the specification as information that is particular to an array. This element is missing in Morris. Selective binding of Morris's control oligonucleotides demonstrates the lack of cross-hybridization between probes but does not provide any information that is particular to the array. As such, contrary to the assertion of the Examiner, Morris's sequence tags are not array information features.

In view of the foregoing discussion, Morris does not disclose each and every element of the claimed invention, as explained above. It fails to provide, *inter alia*, instruction for decoding encoded array information. Therefore, Claims 1-2, and 26-27 are not anticipated under 35 U.S.C. § 102(b) by Morris and this rejection may be withdrawn.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 3-5, and 7 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morris et al. (EP 0799897 A1), in view of Balaban et al. (USPN 6,229,911). The Applicants traverse this rejection.

In order to meet its burden in establishing a rejection under 35 U.S.C. §103, the Office must first demonstrate that a prior art reference, or references when combined, teach or suggest all claim elements. See, e.g., *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740 (2007); *Pharmastem Therapeutics v. Viacell et al.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007); MPEP § 2143(A)(1). In addition to demonstrating that all elements were known in the prior art, the Office must also articulate a reason for combining the elements. See, e.g., *KSR* at 1741; *Omegaflex, Inc. v. Parker-Hannifin Corp.*, 243 Fed. Appx. 592, 595-596 (Fed. Cir. 2007) citing *KSR*. Further, the Supreme Court in *KSR* also stated that that “a court *must* ask whether the improvement is more than the predictable use of prior art elements according to their established functions.” *KSR* at 1740; emphasis added. As such, in addition to showing that all elements of a claim were known in the prior art and that one of skill had a reason to combine them, the Office must also provide evidence that the combination would be a predicted success.

As set forth above, Morris fails to disclose the claimed element of instruction for decoding encoded array information obtained from an array comprising one or more array information features. The Applicants respectfully submit that Morris also fails to suggest this element because DNA TAGS is information about the specificity of tag nucleic acids generated by Morris, and not instruction for decoding encoded array information. Thus, Morris fails to teach or suggest instruction for decoding encoded array information, as claimed by the Applicants.

As Balaban was solely cited for its alleged disclosure of a table listing, Balaban fails to remedy the deficiencies of Morris.

Therefore, for the reasons stated above, a *prima facie* case of obviousness has not been established. Accordingly, the Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 1, 3-5, and 7 be withdrawn.

Claims 1 and 7-9 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morris et al. (EP 0799897 A1), in view of Spaulding et al. (USPN

2,886,241), and in further view of Cowlshaw (IEEE Proc. Comput. Digit. Tech., 49:102-104.)

As discussed above, Morris fails to disclose or suggest the claimed elements of instruction for decoding encoded array information. Since Spaulding and Cowlshaw are cited only for their alleged disclosure binding coded decimal code, Spaulding and Cowlshaw fail to make up for the deficiencies of Morris. As such, this rejection may be withdrawn.

Claim 10 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morris et al. (EP 0799897 A1), in view of Hu et al. (U.S. Publication No. 2004/0248287). The Applicants traverse this rejection.

As discussed above, Morris fails to disclose or suggest the claimed element of instructions for decoding encoded array information. Since Hu is cited only for it alleged disclosure of the use of multi-arrays, Hu fails to make up for the deficiencies in Morris. As such, this rejection may be withdrawn

CONCLUSION

In view of the amendments and remarks above, Applicant(s) respectfully submit(s) that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone John Brady at (408) 553-3584.

The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078.

Respectfully submitted,

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